

CLAIMS

What is claimed is:

- 1 1. A conditional access (CA) system comprising:
 - 2 a computing resource configured to run a CA protocol;
 - 3 a smart card interface; and
 - 4 a software wrapper configured to couple the smart card interface to the CA
 - 5 protocol.

- 1 2. The CA system of claim 1, wherein the smart card interface complies substantially
- 2 with International Organization for Standardization standard 7816 (ISO 7816).

- 1 3. The CA system of claim 1, wherein the CA protocol is selected from the group
- 2 consisting of National Renewable Security Standard Part B (NRSS-B), OpenCable™
- 3 Host Point Of Deployment Interface Specification (POD), Common Interface
- 4 Specification for Conditional Access and other Digital Video Broadcasting Decoder
- 5 Applications (CI), and Conditional Access System for Terrestrial Broadcast (ATSC-
- 6 A70).

- 1 4. The CA system of claim 1, wherein the software wrapper is configured to run on the
- 2 computing resource.

- 1 5. A smart card interface comprising:

2 a smart card receptacle for coupling to a smart card to communicate smart card
3 signals;
4 a Personal Computer Memory Card International Association (PCMCIA)
5 Application Programming Interface (API); and
6 wrapper software interfacing the smart card signals and the PCMCIA API.

1 6. The smart card interface of claim 5, where the PCMCIA API is a CA API.

1 7. The smart card interface of claim 6, where the smart card signals are received from
2 an ISO 7816 smart card.

1 8. A conditional access (CA) system comprising:
2 means for executing a CA program;
3 means for coupling to a smart card interface; and
4 means for executing interfacing software.

1 9. The system of claim 8 wherein interfacing software comprises:
2 means for coupling to smart card signals;
3 means for coupling to the CA program API; and
4 means for routing the smart card signals to and from the CA program.

1 10. A conditional access (CA) method comprising:
2 routing signals received from a smart card interface to interface software;
3 coupling an output of the interface software to an API of a CA protocol;

4 coupling an output of the CA protocol to an input of the interface software; and
5 routing output signals of the interface software to the smart card interface.

1 11. A conditional access (CA) method comprising:
2 routing smart card signals to interface software executing on a first computing
3 resource;
4 coupling the inputs and outputs of the interface software to a CA protocol
5 executing on a second computing resource; and
6 executing a software wrapper program on a third computing resource coupling a
7 smart card interface to the CA protocol.

1 12. The method of claim 11 wherein the first computing resource, the second
2 computing resource, and the third computing resource are a common computing
3 resource.

1 13. A method for interfacing to a conditional access protocol, the method comprising:
2 receiving signals and data from a smart card interface;
3 transforming the received signals and data from the smart card interface into a
4 format compatible with the conditional access protocol;
5 presenting the transformed received signals and data from the smart card
6 interface to a conditional access system implementing the conditional access protocol;
7 receiving from the conditional access system signals and data;
8 transforming the received signals and data from the conditional access system
9 into a format compatible with the smart card interface; and

10 presenting the transformed received signals and data from the conditional access
11 system to the smart card interface.

1 14. The method of claim 13 wherein the smart card interface is an ISO 7816 smart card
2 interface.

1 15. The method of claim 13 wherein the conditional access protocol is a standard
2 conditional access protocol.

1 16. The method of claim 15 wherein the standard conditional access protocol is
2 selected from the group consisting of National Renewable Security Standard Part B
3 (NRSS-B), OpenCable™ Host Point Of Deployment Interface Specification (POD),
4 Common Interface Specification for Conditional Access and other Digital Video
5 Broadcasting Decoder Applications (CI), and Conditional Access System for Terrestrial
6 Broadcast (ATSC-A70).

1 17. A conditional access (CA) system comprising:
2 a first computing resource configured to execute a NRSS-B protocol;
3 an ISO 7816 smart card interface; and
4 a software wrapper configured to execute on a second computing resource to
5 couple the ISO 7816 smart card interface to the NRSS-B protocol.

1 18. The system of claim 17 wherein the first computing resource and the second
2 computing resource are a same computing resource.

1 19. A machine-readable program storage medium tangibly embodying information
2 allowing a machine to perform a method for conditional access, the method comprising:
3 receiving signals and data from a smart card interface;
4 transforming the received signals and data from the smart card interface into a
5 format compatible with the conditional access protocol;
6 presenting the transformed received signals and data from the smart card
7 interface to a conditional access system implementing the conditional access protocol;
8 receiving from the conditional access system signals and data;
9 transforming the received signals and data from the conditional access system
10 into a format compatible with the smart card interface; and
11 presenting the transformed received signals and data from the conditional access
12 system to the smart card interface.

1 20. A conditional access (CA) system comprising:
2 a first computing resource configured to execute a first CA protocol;
3 a second computing resource configured to execute a second CA protocol; and
4 a third computing resource configured to couple the first computing resource to
5 the second computing resource.

1 21. The conditional access (CA) system of claim 20 wherein the second CA protocol is
2 not an industry standard CA protocol.

1 22. The conditional access (CA) system of claim 21 wherein the second CA protocol
2 interfaces to a smart card.

1 23. The conditional access (CA) system of claim 20 wherein the third computing
2 resource configured to couple the first computing resource to the second computing
3 resource is further configured such that the second CA protocol is substantially
4 compliant with the first CA protocol.

1 24. The conditional access (CA) system of claim 20 wherein the first computing
2 resource, the second computing resource, and the third computing resource execute code
3 on a single processor.